

## ABSTRACT

An object of the present invention is to provide a honeycomb structural body which is low in pressure loss and can prolong a period up to a regenerating process. The present invention is directed to a columnar honeycomb structural body comprising a large number of through holes placed in parallel with one another in a length direction with wall portion interposed therebetween, wherein: each of the through holes has one of ends sealed; one end face of the through hole differs in opening area from the other end face thereof; a ceramic material which constitutes the wall portion has an average pore diameter in a range from 5 to 30  $\mu\text{m}$ ; and the rate of capacity of micro pores each having a pore diameter two or more times larger than the average pore diameter is set to 30% or less of the capacity of the entire micro pores.